



Damiatta University
Faculty of Commerce
English Program

Financial Institutions, Markets, and Money

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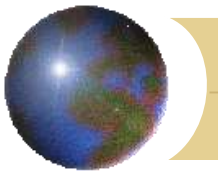


CHAPTER 3



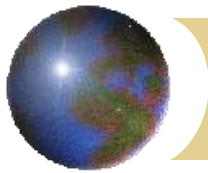
THE LEVEL OF INTEREST RATES





Learning Objectives

1. Define the concept of an interest rate and explain the role of interest rates in the economy.
2. Define the concept of the real interest rate and explain what causes the real interest rate to rise and fall.
3. Explain how inflation affects interest rates.
4. Calculate the realized real rate of return on an investment.
5. *Circumstances of the Negative Interest Rates.*
6. *Explain how economists and financial decision makers forecast interest rates.*



NEGATIVE INTEREST RATES

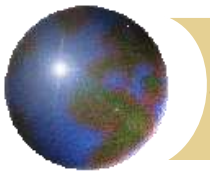
$$i = r + \Delta P_e$$

- The **real** rate of interest is always positive because the human nature is such that nearly all market participants have a positive time preference for consumption.

In a classical economic system, interest rates are determined by the return on real assets and by society's positive time preference. Because the economic system is in real terms, the real rate of interest is always positive.

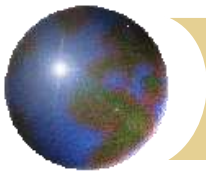
- The Fisher equation suggests that a negative **nominal** interest rate occurs when the expected rate of deflation (a negative term) exceeds the real rate of interest.

In a monetary system where inflation/deflation can occur, the nominal interest rate can mathematically be negative when the deflation rate is larger than the real interest rate.



NEGATIVE INTEREST RATES

- ❑ Negative interest rates occur infrequently and usually only when a country's central bankers are forced to utilize the monetary policy tool -- where the interest rates are set below zero -- during harsh economic times.
- ❑ A negative interest rate means the lender is paying the individual or business to borrow money from them, which means that borrowers get paid and savers are penalized.
- ❑ In harsh economic times, people and businesses tend to hold on to their cash while they wait for the economy to improve. This strategy stimulates borrowing and lending.

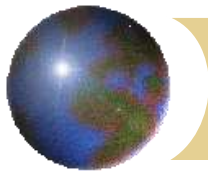


FORECASTING INTEREST RATES

There are two of the popular forecasting methods used by economists on Wall Street: statistical models of the economy and the flow-of-funds approach.

ECONOMIC MODELS

FLOW-OF-FUNDS ACCOUNT FORECASTING



ECONOMIC MODELS

- ❑ Economic models predict interest rates by estimating the statistical relationships between measures of the output of goods and services in the economy and the level of interest rates.
- ❑ The common element of all such models is that they produce interest rate forecasts assuming that the pattern of causality among economic variables is stable into the future.
- ❑ A more modest model is one developed by the Federal Reserve Bank of **St. Louis**.
- ❑ This model consists of only eight basic equations and generates quarterly forecasts for a number of key economic variables, such as the change in nominal and real GDP, the change in the price level (inflation), the unemployment rate, and the market rate of interest.
- ❑ The key input variables into the model are the
- ❑ change in the nation's money supply, the change in federal government expenditures, the potential full-employment output of goods and services in the economy, and past changes in price levels.

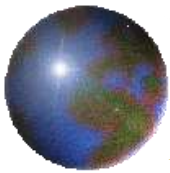
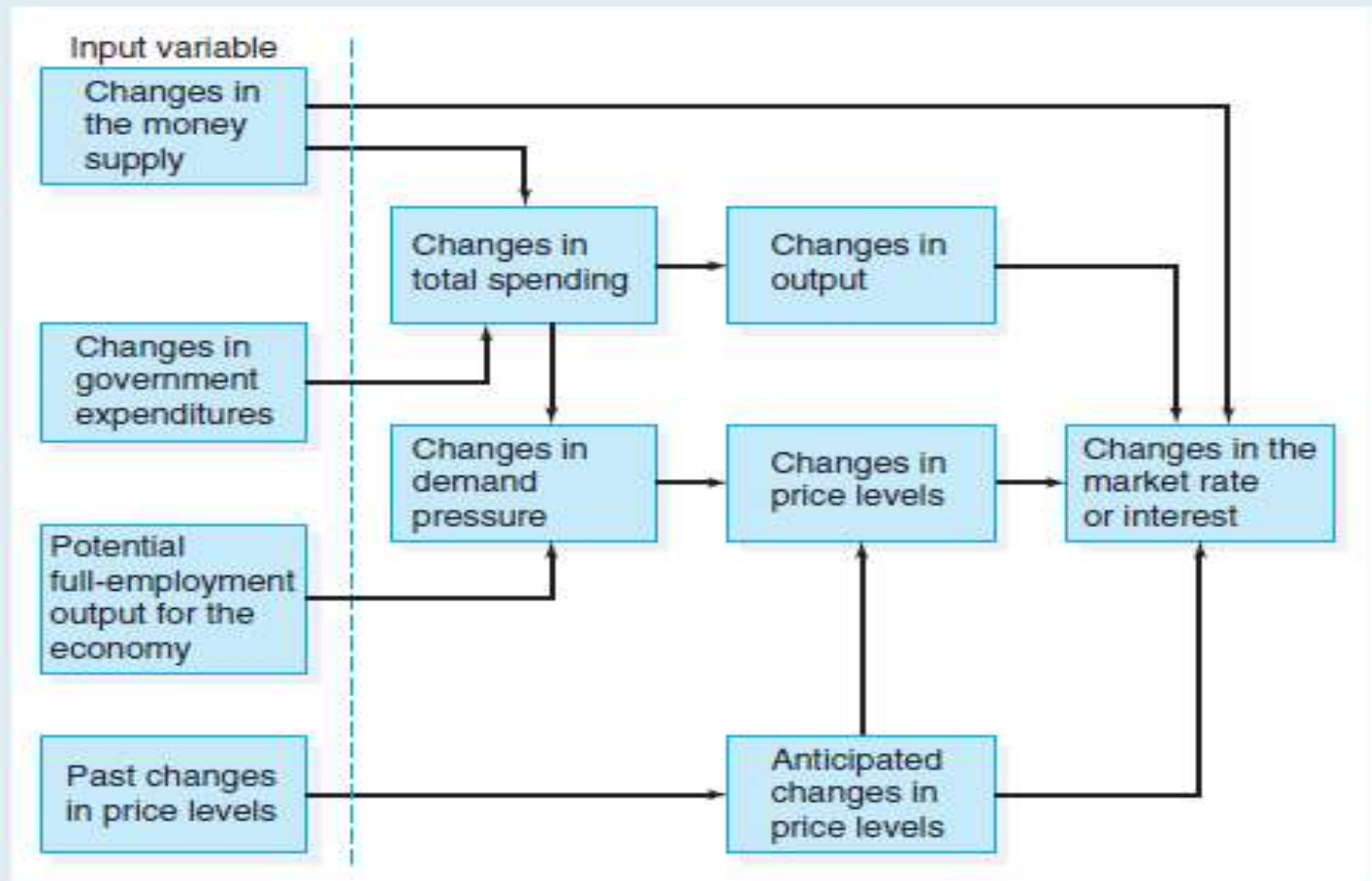
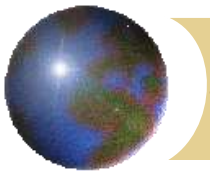


EXHIBIT 4.7

The Federal Reserve Bank of St. Louis Interest Rate Forecasting Model



In the St. Louis Fed model, as in most sophisticated interest rate forecasting models, changes in the money supply, government spending, economic activity, and inflation determine the interest rate.



FLOW-OF-FUNDS ACCOUNT FORECASTING

- ❑ One of the most widely used interest rate forecasting techniques uses the flow-of-funds framework embedded within the loanable funds' theory of interest rates.
- ❑ The flow-of-funds data show the movement of savings—the sources and uses of funds—through the economy in a structured and comprehensive manner.
- ❑ The flow-of-funds accounts are companion data to the national income accounts, which provide information about the flow of goods and services in the real economy.
- ❑ Most of these studies conclude that interest rate forecasters perform poorly.